

Common Drug Stems

Once you learn the common features of a drug class, you must be able to distinguish which drugs belong to each class. Many times you can identify a drug's class by looking at the generic name. Generic drugs of the same class often share a common drug stem. A **stem** is a group of letters occurring within a word, base, or phrase. Consider drugs in the ACE inhibitor class. Each end with the common drug stem *-pril* (such as *benazepril* and *lisinopril*).

Learning common drug stems can be helpful in studying pharmacology. Once you learn the common stem of a drug class, you can focus on learning the pharmacology of the entire class instead of the individual drugs. Furthermore, knowing stems can help you determine the class of a drug quickly without necessarily memorizing the specific brand and generic name. The following table provides a list of common suffixes of drug classes.

Stem	Drug Class	Therapeutic Use	Generic Examples
-afil	Phosphodiesterase inhibitors	Erectile dysfunction, pulmonary HTN	Sildenafil
-ane	Inhaled anesthetics	Anesthesia	Halothane
-artan	Angiotensin receptor blockers	Hypertension	Losartan
-azepam, -zolam	Benzodiazepines	Anxiety	Lorazepam, midazolam
-azine	Phenothiazines	Antipsychotic	Chlorpromazine
-azole	Azole antifungals	Antifungal	Ketoconazole
-barbital	Barbituates	Anxiety	Phenobarbital
-caine	Local anesthetics	Anesthesia	Lidocaine
-cillin	Penicillin antibiotics	Antibiotic	Ticarcillin
-cycline	Tetracyclines	Antibiotic	Doxycycline
-etine	Selective serotonin reuptake inhibitors	Depression	Fluoxetine
-feb, -fene	Selective estrogen response modifiers	Osteoporosis, breast cancer	Tamoxifen, clomifene
-floxacin	Fluoroquinolones	Antibiotics	Levofloxacin
-fungin	Echinocandins	Antifungal	Caspofungin
-grastim, gramostim	Granulocyte colony stimulating factors	Blood dyscrasias	Filgrastim, sargramostim
-ide	Loop diuretics	High blood pressure	Furosemide
-ipine	Dihydropyridine calcium channel blockers	High blood pressure	Nifedipine
-ipramine	Tricyclic antidepressants	Depression	Desipramine
-ium, -uronium	Nondepolarizing paralytics	Anesthesia	Vecuronium, atracurium

-lukast	LTD4 receptor antagonist	Asthma	Montelukast
-navir	Protease inhibitor	Antiviral	Saquinavir
-olol	Beta blocker	High blood pressure	Propranolol
-oxin	Cardiac glycoside	Arrhythmias	Digoxin
-phylline	Methylxanthine	Bronchodilator	Theophylline
-pril	ACE inhibitor	High blood pressure	Lisinopril
-quine	Quinolone derivatives	Antimalarial	Chloroquine
-statin	HMG-CoA reductase inhibitors	Hyperlipidemia	Simvastatin
-tecan	Topoisomerase I inhibitor	Chemotherapy	Topotecan
-terol	β 2 agonist	Bronchodilator	Albuterol
-tidine	Second generation antihistamine	Allergies	Cimetidine
-fine	Allylamine antifungals	Antifungal	Terbinafine
-toposide	Topoisomerase II inhibitor	Chemotherapy	Etoposide
-triptan	5-HT _{1B/1D} agonist	Migraines	Sumatriptan
-tropin	Pituitary hormone	Hormone deficiency	Somatotropin
-vaptan	Vasopressin receptor antagonist	Hypertension	Tolvaptan
-zosin	α 1 antagonist	High blood pressure, benign prostatic hypertrophy	Terazosin